Amendments to the Claims

This listing of claims replaces all prior versions and listings of claims in the application.

Listing of Claims

1. (Canceled)

2. (Currently Amended) A light-emitting device comprising:

a first electrode formed on an insulating surface;

a first insulating layer covering an end portion of the first electrode and comprising a tapered edge;

a second insulating layer formed on the first electrode and the first insulating layer;

an organic compound layer formed on the second insulating layer; and

a second electrode formed on the organic compound layer,

~~wherein the first electrode and the organic compound layer are connected to each other through a tunnel junction; and~~

wherein the first electrode is not in direct contact with the organic compound layer.

3-4. (Canceled)

5. (Currently Amended) A light-emitting device comprising:

a thin film transistor comprising a source region and a drain region;

an interlayer insulating film over the source region and the drain region;

a drain electrode connected to the drain region through an opening formed in the interlayer insulating film;

a first electrode formed on the interlayer insulating film so as to be connected to the drain electrode;

a first insulating layer comprising an opening on the first electrode, covering an end portion of the first electrode, and comprising a tapered edge;

a second insulating layer formed on the first electrode and the first insulating layer;

an organic compound layer formed on the second insulating layer; and

a second electrode formed on the organic compound layer,

~~wherein the first electrode and the organic compound layer are connected to each other through a tunnel junction; and~~

wherein the first electrode is not in direct contact with the organic compound layer.

6-7. (Canceled)

8. (Original) A light-emitting device according to claim 2, wherein the second insulating layer comprises at least one selected from the group consisting of silicon oxide, silicon nitride, and silicon oxynitride.

9-10. (Canceled)

11. (Original) A light-emitting device according to claim 5, wherein the second insulating layer comprises at least one selected from the group consisting of silicon oxide, silicon nitride, and silicon oxynitride.

12-13. (Canceled)

14. (Original) A light-emitting device according to claim 2, wherein the second insulating layer comprises carbon as a main component thereof.

15-16. (Canceled)

17. (Original) A light-emitting device according to claim 5, wherein the second insulating layer comprises carbon as a main component thereof.

18-19. (Canceled)

20. (Original) A light-emitting device according to claim 2, wherein the insulating surface comprises at least one of silicon nitride and silicon oxynitride.

21-22. (Canceled)

23. (Previously Presented) A light-emitting device according to claim 5, wherein the interlayer insulating film comprises at least one of silicon nitride and silicon oxynitride.

24-25. (Canceled)

26. (Original) A light-emitting device according to claim 5, wherein the interlayer insulating film comprises a first layer comprising at least one of polyimide and acrylic resin and a second layer comprising at least one of silicon nitride, silicon oxynitride, carbon, and a densified film of the first layer.

27-28. (Canceled)

29. (Original) A light-emitting device according to claim 2, wherein the first insulating layer comprises at least one of polyimide and acrylic resin.

30-31. (Canceled)

32. (Original) A light-emitting device according to claim 5, wherein the first insulating layer comprises at least one of polyimide and acrylic resin.

33-34. (Canceled)

35. (Original) A light-emitting device according to claim 2, wherein the second insulating layer has a thickness of 1 to 10nm.

36-37. (Canceled)

38. (Original) A light-emitting device according to claim 5, wherein the second insulating layer has a thickness of 1 to 10nm.

39-40. (Canceled)

41. (Previously Presented) A light-emitting device according to claim 2, wherein the insulating surface comprises at least one of polyimide resin and acrylic resin.

42-43. (Canceled)

44. (Previously Presented) A light-emitting device according to claim 5, wherein the interlayer insulating film comprises at least one of polyimide resin and acrylic resin.

45-46. (Canceled)

47. (Original) A light-emitting device according to claim 2, wherein the light-emitting device is incorporated in one selected from the group consisting of a computer, a digital camera, a video camera, and a mobile phone.

48-49. (Canceled)

50. (Original) A light-emitting device according to claim 5, wherein the light-emitting device is incorporated in one selected from the group consisting of a computer, a digital camera, a video camera, and a mobile phone.

51-52. (Canceled)

53. (Withdrawn) A method of manufacturing a light-emitting apparatus, comprising the steps of:

forming a first electrode on an insulating surface;

forming a first insulating layer covering an end portion of the first electrode and comprising a tapered edge;

forming a second insulating layer on the first electrode and the first insulating layer;

forming an organic compound layer on the second insulating layer; and

forming a second electrode on the organic compound layer,

wherein the first electrode and the organic compound layer are connected to each other through a tunnel junction.

54. (Withdrawn) A method of manufacturing a light-emitting apparatus, comprising the steps of:

forming a first electrode on an insulating surface;

forming a first insulating layer covering an end portion of the first electrode and comprising a tapered edge;

forming a second insulating layer on the first electrode and the first insulating layer;

forming an organic compound layer on the second insulating layer; and

forming a second electrode on the organic compound layer,

wherein the second insulating layer has a thickness that allows the first electrode and the organic compound layer to form a tunnel junction.

55. (Withdrawn) A method of manufacturing a light-emitting apparatus, comprising the steps of:

forming a first electrode on an insulating surface;

forming a first insulating layer covering an end portion of the first electrode and comprising a tapered edge;

forming a second insulating layer on the first electrode and the first insulating layer;

forming an organic compound layer on the second insulating layer; and

forming a second electrode on the organic compound layer,

wherein the second insulating layer has a thickness that allows the tunnel current or the Fowler-Nordheim current to flow therethrough.

56. (Withdrawn) A method of manufacturing a light-emitting device, comprising the steps of:

forming an interlayer insulating film over a source region and a drain region of a thin film transistor;

forming an opening reaching the drain region in the interlayer insulating film;

forming a drain electrode;

forming a first electrode connected to the drain electrode on the interlayer insulating film;

forming an insulating layer that covers the first electrode connected to the drain electrode;

forming an opening in the insulating layer on the first electrode to provide a first insulating layer;

forming a second insulating layer on the first electrode and the first insulating layer;

forming an organic compound layer on the second insulating layer; and

forming a second electrode on the organic compound layer,

wherein the first electrode and the organic compound layer are connected to each other through a tunnel junction.

57. (Withdrawn) A method of manufacturing a light-emitting device, comprising the steps of:

forming an interlayer insulating film over a source region and a drain region of a thin film transistor;

forming an opening reaching the drain region in the interlayer insulating film;

forming a drain electrode;

forming a first electrode connected to the drain electrode on the interlayer insulating film;

forming an insulating layer that covers the first electrode connected to the drain electrode;

forming an opening in the insulating layer on the first electrode to provide a first insulating layer;

forming a second insulating layer on the first electrode and the first insulating layer;

forming an organic compound layer on the second insulating layer; and

forming a second electrode on the organic compound layer,

wherein the second insulating layer has a thickness that allows the first electrode and the organic compound layer to form a tunnel junction.

58. (Withdrawn) A method of manufacturing a light-emitting device, comprising the steps of:

forming an interlayer insulating film over a source region and a drain region of a thin film transistor;

forming an opening reaching the drain region in the interlayer insulating film;

forming a drain electrode;

forming a first electrode connected to the drain electrode on the interlayer insulating film;

forming an insulating layer that covers the first electrode connected to the drain electrode;

forming an opening in the insulating layer on the first electrode to provide a first insulating layer;

forming a second insulating layer on the first electrode and the first insulating layer;

forming an organic compound layer on the second insulating layer; and

forming a second electrode on the organic compound layer,

wherein the second insulating layer has a thickness that allows the tunnel current or the Fowler-Nordheim current to flow therethrough.

59. (Withdrawn) A method of manufacturing a light-emitting device according to claim 53, wherein the second insulating layer comprises at least one selected from the group consisting of silicon oxide, silicon nitride, and silicon oxynitride.

60. (Withdrawn) A method of manufacturing a light-emitting device according to claim 54, wherein the second insulating layer comprises at least one selected from the group consisting of silicon oxide, silicon nitride, and silicon oxynitride.

61. (Withdrawn) A method of manufacturing a light-emitting device according to claim 55, wherein the second insulating layer comprises at least one selected from the group consisting of silicon oxide, silicon nitride, and silicon oxynitride.

62. (Withdrawn) A method of manufacturing a light-emitting device according to claim 56, wherein the second insulating layer comprises at least one selected from the group consisting of silicon oxide, silicon nitride, and silicon oxynitride.

63. (Withdrawn) A method of manufacturing a light-emitting device according to claim 57, wherein the second insulating layer comprises at least one selected from the group consisting of silicon oxide, silicon nitride, and silicon oxynitride.

64. (Withdrawn) A method of manufacturing a light-emitting device according to claim 58, wherein the second insulating layer comprises at least one selected from the group consisting of silicon oxide, silicon nitride, and silicon oxynitride.

65. (Withdrawn) A method of manufacturing a light-emitting device according to claim 53, wherein the second insulating layer comprises carbon as a main component thereof.

66. (Withdrawn) A method of manufacturing a light-emitting device according to claim 54, wherein the second insulating layer comprises carbon as a main component thereof.

67. (Withdrawn) A method of manufacturing a light-emitting device according to claim 55, wherein the second insulating layer comprises carbon as a main component thereof.

68. (Withdrawn) A method of manufacturing a light-emitting device according to claim 56, wherein the second insulating layer comprises carbon as a main component thereof.

69. (Withdrawn) A method of manufacturing a light-emitting device according to claim 57, wherein the second insulating layer comprises carbon as a main component thereof.

70. (Withdrawn) A method of manufacturing a light-emitting device according to claim 58, wherein the second insulating layer comprises carbon as a main component thereof.

71. (Withdrawn) A method of manufacturing a light-emitting device according to claim 56, wherein the interlayer insulating film comprises at least one of polyimide and acrylic resin.

72. (Withdrawn) A method of manufacturing a light-emitting device according to claim 57, wherein the interlayer insulating film comprises at least one of polyimide and acrylic resin.

73. (Withdrawn) A method of manufacturing a light-emitting device according to claim 58, wherein the interlayer insulating film comprises at least one of polyimide and acrylic resin.

74. (Withdrawn) A method of manufacturing a light-emitting device according to claim 56, wherein the interlayer insulating film comprises a first layer comprising at least one of polyimide and acrylic resin and a second layer comprising at least one of silicon nitride, silicon oxynitride, carbon, and a densified film of the first layer.

75. (Withdrawn) A method of manufacturing a light-emitting device according to claim 57, wherein the interlayer insulating film comprises a first layer comprising at least one of polyimide and acrylic resin and a second layer comprising at least one of silicon nitride, silicon oxynitride, carbon, and a densified film of the first layer.

76. (Withdrawn) A method of manufacturing a light-emitting device according to claim 58, wherein the interlayer insulating film comprises a first layer comprising at least one of polyimide and acrylic resin and a second layer comprising at least one of silicon nitride, silicon oxynitride, carbon, and a densified film of the first layer.

77. (Withdrawn) A method of manufacturing a light-emitting device according to claim 53, wherein the first insulating layer comprises at least one of polyimide and acrylic resin, and a surface of the first insulating layer is modified by plasma treatment.

78. (Withdrawn) A method of manufacturing a light-emitting device according to claim 54, wherein the first insulating layer comprises at least one of polyimide and acrylic resin, and a surface of the first insulating layer is modified by plasma treatment.

79. (Withdrawn) A method of manufacturing a light-emitting device according to claim 55, wherein the first insulating layer comprises at least one of polyimide and acrylic resin, and a surface of the first insulating layer is modified by plasma treatment.

80. (Withdrawn) A method of manufacturing a light-emitting device according to claim 56, wherein the first insulating layer comprises at least one of polyimide and acrylic resin, and a surface of the first insulating layer is modified by plasma treatment.

81. (Withdrawn) A method of manufacturing a light-emitting device according to claim 57, wherein the first insulating layer comprises at least one of polyimide and acrylic resin, and a surface of the first insulating layer is modified by plasma treatment.

82. (Withdrawn) A method of manufacturing a light-emitting device according to claim 58, wherein the first insulating layer comprises at least one of polyimide and acrylic resin, and a surface of the first insulating layer is modified by plasma treatment.

83. (Withdrawn) A method of manufacturing a light-emitting device according to claim 53, wherein the second insulating layer has a thickness of 1 to 10nm.

84. (Withdrawn) A method of manufacturing a light-emitting device according to claim 54, wherein the second insulating layer has a thickness of 1 to 10nm.

85. (Withdrawn) A method of manufacturing a light-emitting device according to claim 55, wherein the second insulating layer has a thickness of 1 to 10nm.

86. (Withdrawn) A method of manufacturing a light-emitting device according to claim 56, wherein the second insulating layer has a thickness of 1 to 10nm.

87. (Withdrawn) A method of manufacturing a light-emitting device according to claim 57, wherein the second insulating layer has a thickness of 1 to 10nm.

88. (Withdrawn) A method of manufacturing a light-emitting device according to claim 58, wherein the second insulating layer has a thickness of 1 to 10nm.

89. (New) A light-emitting device comprising:

a first electrode formed on an insulating surface;

a first insulating layer covering an end portion of the first electrode and comprising a tapered edge;

a layer comprising carbon formed on the first electrode and the first insulating layer;

an organic compound layer formed on the layer comprising carbon; and

a second electrode formed on the organic compound layer,

wherein the first electrode is not in direct contact with the organic compound layer.

90. (New) A light-emitting device according to claim 89, wherein the layer comprising carbon comprises diamond-like carbon.

91. (New) A light-emitting device according to claim 89, wherein the insulating surface comprises at least one of silicon nitride and silicon oxynitride.

92. (New) A light-emitting device according to claim 89, wherein the insulating surface comprises a first layer comprising at least one of polyimide and acrylic resin and a second layer comprising at least one of silicon nitride, silicon oxynitride, carbon, and a densified film of the first layer.

93. (New) A light-emitting device according to claim 89, wherein the first insulating layer comprises at least one of polyimide and acrylic resin.

94. (New) A light-emitting device according to claim 89, wherein the layer comprising carbon has a thickness of 1 to 10nm.

95. (New) A light-emitting device according to claim 89, wherein the insulating surface comprises at least one of polyimide resin and acrylic resin.

96. (New) A light-emitting device according to claim 89, wherein the light-emitting device is incorporated in one selected from the group consisting of a computer, a digital camera, a video camera, and a mobile phone.

97. (New) A light-emitting device according to claim 89, further comprising a thin film transistor comprising:

a source region and a drain region; and

a drain electrode connected to the drain region through an opening formed in the insulating surface,

wherein the first electrode is connected to the drain electrode.

98. (New) A light-emitting device according to claim 2, wherein the first electrode and the organic compound layer are connected to each other through a tunnel junction.

99. (New) A light-emitting device according to claim 2, wherein the second insulating layer has a thickness that allows the first electrode and the organic compound layer to form a tunnel junction.

100. (New) A light-emitting device according to claim 2, wherein the second insulating layer has a thickness that allows a tunnel current or a Fowler-Nordheim current to flow therethrough.

101. (New) A light-emitting device according to claim 5, wherein the first electrode and the organic compound layer are connected to each other through a tunnel junction.

102. (New) A light-emitting device according to claim 5, wherein the second insulating layer has a thickness that allows the first electrode and the organic compound layer to form a tunnel junction.

103. (New) A light-emitting device according to claim 5, wherein the second insulating layer has a thickness that allows a tunnel current or a Fowler-Nordheim current to flow therethrough.